CLAIMS

We claim:

1. A method of converting a call flow into a state-based representation, the method comprising:

walking a call flow and converting each page of the call flow into a rule of a higher level representation of the call flow;

augmenting the higher level representation with terminal symbols representing state variable assignments and comparisons associated with decision and computation shapes in the call flow; and

converting the higher level representation into a state-based representation.

2. The method of claim 1, wherein the equivalent representation is a context-free grammar representation.

3. The method of claim 2, wherein the context free grammar notation is a Backus-Naur Form (BNF).

4. The method of claim 3, wherein the state-based representation is a finite state machine (FSM).

5. The method of claim 3, wherein the step of walking the call flow and converting teach page to a BNF occurs automatically via a computing device.

6. The method of claim 4, wherein the step of augmenting the BNF with terminal symbols occurs automatically via a computing device.

7. The method of claim 1, wherein the call flow comprises at least one page having a set of shapes having specific meanings.

8. The method of claim 7, wherein the set of shapes having special meaning comprises at least: parallelograms representing rules, lines representing dialog inputs, rectangular boxes representing dialog outputs or actions, diamonds representing Boolean decision functions, hexagrams representing calculation and assignment functions and annotation shapes representation comments.

9. The method of claim 4, wherein a grammar compiler is used to convert the BNF into the FSM.

10. The method of claim 9, wherein the FSM may be used by at least one spoken dialog tool to perform generation and testing functions associated with a spoken dialog service.

11. The method of claim 1, wherein the rule comprises terminal symbols comprising the names used to label shapes and transitions of the call flow.

12. The method of claim 1, further comprising generating a unique terminal symbol in the higher level representation that shadows each rule, input, output, decision and calculation within the call flow.

13. The dialog generation module of claim 12, further comprising means for off-line automatically tests the spoken dialog system using the generated test dialogs.

14. The dialog generation module of claim 13, further comprising means for on-line automatically tests the spoken dialog system using the generated test dialogs.

15. A spoken dialog system generated using automatically-created test dialogs, the test dialogs generated according to a method comprising:

converting a call flow developed fro the spoken dialog system into a context free grammar notation;

converting the context free grammar notation into a state-based representation;

generating dialogs associated with the call flow by analyzing the state-based representation, wherein the generated dialogs may be used to test the spoken dialog system.

16. The spoken dialog system of claim 15, wherein the context free grammar notation is a Backus-Naur Form (BNF).

17. The spoken dialog system of claim 15, wherein the state-based representation is a finite state machine (FSM).

18. The spoken dialog system of claim 15, wherein the automatically-created test dialogs are used to off-line test the spoken dialog system.

19. The spoken dialog system of claim 15, wherein the automatically-created test dialogs are used to on-line test the spoken dialog system.

20. The spoken dialog system of claim 15, wherein the automatically-created test dialogs are validated before the dialog system is tested using the test dialogs.